

## REMARKS

This is intended as a full and complete response to the Office Action dated January 28, 2008, having a shortened statutory period for response set to expire on April 28, 2008. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1-40 and 42 are pending in the application. Claims 1-6, 8, 10-40 and 42 remain pending following entry of this response. Claims 1 and 8 have been amended. Claims 7 and 9 have been cancelled. Applicant submits that the amendments and new claims do not introduce new matter.

Further, Applicant is not conceding in this application that those amended (or cancelled) claims are not patentable over the art cited by the Examiner, as the present claim amendments (and cancellations) are only for facilitating expeditious prosecution of the claimed subject matter. Applicant respectfully reserves the right to pursue these pre-amended and cancelled claims and other claims in one or more continuations and/or divisional patent applications.

### Interview Summary

On April 24, 2008, a telephonic interview was held between Gero G. McClellan, attorney of record, Syed S. Ahmed, technical advisor, Aurangzeb Hassan, the Examiner of record, and the Supervisory Examiner. The parties discussed the cited references including *Lee* and *Leahy*. The parties also discussed the claim rejections under 35 USC § 112, second paragraph and the claim rejections under 35 USC § 103 as applied to claim 1. The parties also discussed proposed amendments to claim 1. The proposed amendments are reflected in this response.

During the interview, the parties agreed that the proposed amendments would overcome the claim rejections under 35 USC § 112, second paragraph.

Furthermore, Applicant argued that claim 1 was not made obvious by *Leahy*, in view of *Lee*. No agreement regarding the claim rejection under 35 USC § 103 could be

reached at the time of the interview. However, the Supervisory Examiner suggested that prosecution may be moved forward by having the Applicant submit a detailed explanation as to why the references cannot be combined. Accordingly, Applicant submits the arguments made below for consideration.

#### Claim Rejections - 35 U.S.C. § 112

Claims 1 - 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 2 - 15 are rejected for depending on Claim 1.

As stated above, the Examiner agreed that the rejection is obviated. Therefore, the claims are believed to be allowable, and allowance of the claims is respectfully requested.

#### Claim Rejections - 35 U.S.C. § 103

Claims 1, 2, 5-14, 16 -21, 23, 26-30, 32, 34-40 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Leahy et al.* (U.S. Patent No. 5,029,124, hereinafter, "*Leahy*") in view of *Lee et al.* (U.S. Patent No. 7,174,475, hereinafter, "*Lee*").

Claims 3, 4, 15, 22, 24, 31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Leahy* in view of *Park* (U.S. Patent No. 6,147,926).

The Examiner takes the position that it would be obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the strobe acknowledge signal of *Leahy* with the round-trip path of *Lee*. The Examiner further states that one of ordinary skill would be motivated to make such modification in order to reduce excessive clock skew to better coordinate the clock signal to avoid device failure.

Applicant respectfully traverses these rejections.

The Examiner bears the initial burden of establishing a *prima facie* case of obviousness. See MPEP § 2141. Establishing a *prima facie* case of obviousness

begins with first resolving the factual inquiries of *Graham v. John Deere Co.* 383 U.S. 1 (1966). The factual inquiries are as follows:

- (A) determining the scope and content of the prior art;
- (B) ascertaining the differences between the claimed invention and the prior art;
- (C) resolving the level of ordinary skill in the art; and
- (D) considering any objective indicia of nonobviousness.

Once the *Graham* factual inquiries are resolved, the Examiner must determine whether the claimed invention would have been obvious to one of ordinary skill in the art.

Respectfully, Applicants submit that the Examiner has not properly characterized the teachings of the references and/or the claims at issue. Accordingly, a prima facie case of obviousness has not been established.

For example, regarding claim 1, *Leahy* does not disclose transmitting, via a first signal path, a strobe signal to a receiving circuit, the strobe signal signaling the receiving circuit to latch in the first data on the data bus, and receiving a return signal transmitted via a second signal path, wherein the return signal is the strobe signal. Claims 10, 16, 18, 27, 32 and 39 disclose similar claim limitations. The Examiner argues that the strobe signal and the return signal are found in Figure 2 (reference numbers 38 and 40, respectively) of *Leahy*.

As described in *Leahy*, reference numbers 38 and 40 are a DATA VALID signal and an ACKNOWLEDGE signal (See *Leahy*, col. 5, lines 59-63), where the DATA VALID signal indicates to a destination device that data being transferred to the destination device is valid, and where the ACKNOWLEDGE signal indicates to a source device that the data has been received. (See *Leahy*, col. 5, lines 59-63). Nowhere is it disclosed in *Leahy* that the DATA VALID and the ACKNOWLEDGE signals are one and the same. As shown in Figure 2, these signals are in fact two separate signals.

In contrast, Figure 1 of the application clearly illustrates that the return signal 122 and the strobe signal are the same 120. For example, the return signal 122 is tapped off from the strobe signal 120. In some embodiments, the strobe signal may also be inputted into a buffer 124, where the output of the buffer is the return signal 122 (as illustrated in Figure 1). Nonetheless, as a buffer is simply used to prevent any signal attenuation of the strobe/return signal, the return signal is still the same as the strobe signal. Therefore, *Leahy* does not disclose transmitting, via a first signal path, a strobe signal to a receiving circuit, the strobe signal signaling the receiving circuit to latch in the first data on the data bus, and receiving a return signal transmitted via second signal path, wherein the return signal is the strobe signal.

Further, the Federal Circuit has held that even if all of the elements of a claimed invention are found in a combination of prior art references, analysis requires "consideration of two factors:

- (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition or device, or carry out the claimed process; and
- (2) whether the prior art would also have revealed that in so making or carrying out, those of ordinary skill would have a reasonable expectation of success." *PharmaStem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342 (Fed. Cir. 2007)

In this regard the Federal Circuit points out that in *KSR International Co. vs. Teleflex, Inc.*, 127 S. Ct. 1727 (2007) the Supreme Court "acknowledged the importance of identifying 'a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does' in an obviousness determination." *Takeda Chemical Industries, Ltd. v. Alphaphram Pty, Ltd.*, 492 F.3d 1350, 1356 (Fed. Cir. 2007).

In this case, the references, alone or in combination, fail to identify a reason or suggestion for combining/modifying the references to yield the elements as claimed.

*Leahy* discloses a burst mode asynchronous protocol, where the data transfer protocol uses a handshake procedure including the DATA VALID and ACKNOWLEDGE

signals, as explained in *Leahy*, col. 3, line 46 to col. 4, line 41. In the burst mode asynchronous protocol, a small synchronous burst of data is followed by an asynchronous handshake. See *Leahy*, Col. 5, lines 1-13. For example, a source device waits for an ACKNOWLEDGE signal from the destination device to be de-asserted. After the ACKNOWLEDGE signal is de-asserted, data words in the burst are transmitted from the source device to the destination device. Once the destination device begins to receive the data words, the destination device asserts an ACKNOWLEDGE signal any time after the first data word in the burst is received but before the last data word in the burst is received. Subsequently, the source device will interlock and handshake with the ACKNOWLEDGE signal prior to transmitting the next burst data. Accordingly, an asynchronous handshake is performed. See *Leahy*, Col 6, lines 28-45.

*Lee* discloses an approach for dynamically reducing clock skew among various nodes on an integrated circuit. To this end, Figure 6 of *Lee* discloses a return path 650-n for the clock signal associated with each node, which is matched to the length of the primary clock path 640-n, so that the clock skew present at the corresponding node can be estimated as 50% of the round trip delay time. See *Lee*, Col. 4, line 64 – Col. 5, line 7. Accordingly, delays in self-synchronizing delay circuits 630-1 to 630-n may be adjusted such that the corresponding clock signals arriving at each node are all in phase with a PLL. See *Lee*, Col, 4, lines 47-62. Thus, the excessive clock skew when distributing a clock signal to a plurality of nodes can be avoided.

Such a clock skew is not at all a concern in the asynchronous protocol disclosed by *Leahy*. In particular, the handshake signals of *Leahy* (i.e. DAVA VALID and ACKNOWLEDGE) need not be synchronized with corresponding signals on any other node. Furthermore, the handshake signals neither represent clock signals nor are they distributed to a plurality of nodes. Thus, the particular purpose and function of the return path of *Lee* simply has no applicability to the handshake signals of *Leahy*. Likewise, the handshake signals of *Leahy* have no significance in the context of the return path of *Lee*. In other words, the very elements of the respective references that

the Examiner relies for purposes of the present rejection are fundamentally unrelated and incompatible with one another.

Therefore, Applicant respectfully submits that the motivation indicated by the Examiner to combine the *Lee* and *Leahy* to reduce excessive clock skew to better coordinate the clock signal to avoid device failure is defective.

Accordingly, Applicant submits there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one ordinary skill in the art, to modify the reference or to combine the reference teachings.

Therefore, the withdrawal of the rejection to claims 1, 10, 16, 18, 27, 32, 39 and the claims that depend therefrom is respectfully requested.

Therefore, the claims are believed to be allowable, and allowance of the claims is respectfully requested.

#### Conclusion

Having addressed all issues set out in the office action, Applicant respectfully submits that the claims are in condition for allowance and respectfully requests that the claims be allowed.

Respectfully submitted, and  
**S-signed pursuant to 37 CFR 1.4,**

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